

**IN THE U.S. RECEIVING OFFICE  
UNDER THE PATENT COOPERATION TREATY (PCT)**

## **RESPONSE TO NOTIFICATION OF DEFECTIVE RESPONSE**

**Mail Stop PCT**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C.  
Customer Number 23859

Sir:

In response to Notification of Defective Response mailed February 22, 2006, applicants hereby submit a diskette containing the corrected Sequence Listing for this application in computer readable form (CRF) and a corrected paper copy of the Sequence Listing in compliance with 37 C.F.R. §§ 1.821-1.825.

Applicant also provides herewith a statement that the content of the Sequence Listing information recorded in computer readable form is identical to the written Sequence Listing and includes no new matter.

## **Sequence Listing Statement**

This application contains nucleic acid and/or protein sequences as defined in Annex C of the PCT Administrative Instructions. Pursuant to PCT Rule 5.2(a), the application includes, as a separate part of the description, a paper copy of a Sequence Listing. Pursuant to Annex C of the PCT Administrative Rules, applicant encloses a 3 & 1/2" diskette containing a computer-readable form of the Sequence Listing. The

information recorded in computer readable form is identical to the written copy of the Sequence Listing present in the application and includes no new matter.

No fee is believed due; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

NEEDLE & ROSENBERG, P.C.



\_\_\_\_\_  
David E. Huizenga  
Registration No. 49,026

NEEDLE & ROSENBERG, P.C.  
Customer Number 23859  
(678) 420-9300  
(678) 420-9301 (fax)

**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8**

I hereby certify that this correspondence, including any items indicated as attached or included, is being deposited with the United States Postal Service in an envelope addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.



\_\_\_\_\_  
David E. Huizenga

March 17, 2006  
Date



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/532,198	Alejandro Sanchez	21101.0049U2
		INTERNATIONAL APPLICATION NO.
		PCT/US03/33590
23859 NEEDLE & ROSENBERG, P.C. SUITE 1000 999 PEACHTREE STREET ATLANTA, GA 30309-3915	RECEIVED FEB 24 2006 NEEDLE & ROSENBERG	I.A. FILING DATE      PRIORITY DATE 10/22/2003      10/22/2002
		CONFIRMATION NO. 8394 371 FORMALITIES LETTER *OC000000018104785*

Date Mailed: 02/22/2006

## NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495)

- Indication of Small Entity Status
- Priority Document
- Copy of the International Application filed on 04/21/2005
- Copy of the International Search Report filed on 04/21/2005
- Preliminary Amendments filed on 04/21/2005
- Biochemical Sequence Diskette filed on 12/23/2005
- Oath or Declaration filed on 08/08/2005
- Biochemical Sequence Listing filed on 12/23/2005
- U.S. Basic National Fees filed on 04/21/2005
- Priority Documents filed on 04/21/2005
- Power of Attorney filed on 08/08/2005
- Specification filed on 04/21/2005
- Claims filed on 04/21/2005
- Abstracts filed on 04/21/2005
- Drawings filed on 04/21/2005

RATH/DEH/CPB  
104 (02/24/2006)

Applicant's response filed 12/23/2005 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 09/22/2005 have not been completed.

- This application does not contain a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). Applicant must provide such statement. If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000).
- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content

of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

**Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).**

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

**For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:**

- **For Rules Interpretation, call (571) 272-0951**
- **For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.**
- **Send e-mail correspondence for Patentin Software Program Help @ [ebc@uspto.gov](mailto:ebc@uspto.gov)**

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

SHAKEEL AHMED

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Telephone: (703) 308-9140 EXT 208

**PART 1 - ATTORNEY/APPLICANT COPY**

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U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/532,198	PCT/US03/33590	21101.0049U2

## STIC Biotechnology Systems Branch

### RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/532,198  
Source: PCF  
Date Processed by STIC: 2/6/06

**THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.**

**PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:**

- 1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

**FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221**

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:**

**<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>**

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Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), **EFS Submission User Manual - ePAVE**
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05



PC

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/532,198

DATE: 02/06/2006  
TIME: 14:26:38

Input Set : A:\ 211010049SEQLIST.TXT  
Output Set: N:\CRF4\02012006\J532198.raw

4 <110> APPLICANT: Sanchez, Alejandro  
5 Robb, Sofia  
7 <120> TITLE OF INVENTION: MANAGING BIOLOGICAL DATABASES  
10 <130> FILE REFERENCE: 21101.0049U2  
12 <140> CURRENT APPLICATION NUMBER: 10/532,198  
13 <141> CURRENT FILING DATE: 2005-04-21  
15 <150> PRIOR APPLICATION NUMBER: PCT/US2003/033590  
16 <151> PRIOR FILING DATE: 2003-10-22  
18 <150> PRIOR APPLICATION NUMBER: 60/420,216  
19 <151> PRIOR FILING DATE: 2002-10-22  
21 <160> NUMBER OF SEQ ID NOS: 9  
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
25 <210> SEQ ID NO: 1  
26 <211> LENGTH: 360  
27 <212> TYPE: DNA  
28 <213> ORGANISM: Artificial Sequence  
30 <220> FEATURE:  
31 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
synthetic construct  
34 <220> FEATURE:  
35 <221> NAME/KEY: misc\_feature  
36 <222> LOCATION: 169  
37 <223> OTHER INFORMATION: n=a, t, c, or g  
39 <220> FEATURE:  
40 <221> NAME/KEY: misc\_feature  
41 <222> LOCATION: 276  
42 <223> OTHER INFORMATION: n=a, t, c, or g  
44 <400> SEQUENCE: 1  
45 cttctgcaag gtccacagtt accattaaca aatcgagtcc tgcagtaaag gaatatgaaa 60  
46 tgagacaatc ctacaatttt tctggagcac ctatgggggg atcagttcaa attcatagca 120  
47 atgtgtcttc tgctgttagag gggcggaaaa gagaaaaagag agaaaatgcna gatcttaatg 180  
48 aaaggcttagc taatttatatt gaaaaggtaa gatttctaga agctchaaac aaaagattaa 240  
49 caaatgaatt gaatacggtt cgtgaaagat ggggttnaaga agctgaaagg atacgagctt 300  
50 tataatgagat tgaaatggat caattgaaaa agttattaga cgaagctgaa gctgctagat 360  
52 <210> SEQ ID NO: 2  
53 <211> LENGTH: 60  
54 <212> TYPE: PRT  
55 <213> ORGANISM: Artificial Sequence  
57 <220> FEATURE:  
58 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
synthetic construct  
59  
61 <220> FEATURE:  
62 <221> NAME/KEY: VARIANT

Does Not Comply  
Corrected Diskette Needed

ppr 1-3

what about 'n' at location 226?

→ this  
needs  
explanation

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/532,198

DATE: 02/06/2006

TIME: 14:26:38

Input Set : A:\ 211010049SEQLIST.TXT  
Output Set: N:\CRF4\02012006\J532198.raw

63 <222> LOCATION: 2, 48  
 64 <223> OTHER INFORMATION: Xaa = any amino acid  
 66 <400> SEQUENCE: 2

67 Asn Xaa Ser Ser Pro Ala Val Lys Glu Tyr Glu Met Arg Gln Ser Tyr  
 68 1 5 10 15  
 69 Asn Phe Ser Gly Ala Pro Met Gly Gly Ser Val Gln Ile His Ser Asn  
 70 20 25 30  
 71 Val Ser Ser Ala Val Glu Gly Arg Glu Arg Glu Lys Arg Glu Met Xaa  
 72 35 40 45  
 73 Asp Leu Asn Glu Arg Leu Ala Asn Tyr Ile Glu Lys  
 74 50 55 60

76 <210> SEQ ID NO: 3  
 77 <211> LENGTH: 60  
 78 <212> TYPE: PRT  
 79 <213> ORGANISM: Artificial Sequence  
 81 <220> FEATURE:  
 82 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
 83 synthetic construct  
 85 <220> FEATURE: *Asn is at location 1*  
 86 <221> NAME/KEY: VARIANT  
 87 <222> LOCATION: 1-10, 13, 14, 17, 18, 20, 21, 42, 45, 47-49, 52, 54, 59  
 88 <223> OTHER INFORMATION: Xaa = any amino acid  
 90 <400> SEQUENCE: 3

91 Asn Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Glu Met Xaa Xaa Ser Tyr  
 92 1 5 10 15  
 93 Xaa Xaa Ser Xaa Xaa Pro (Xaa Xaa Xaa) Ser (Xaa Xaa Xaa) His Ser Xaa  
 94 20 25 30  
 95 Val Xaa Xaa Xaa Xaa Gly Arg Glu Xaa Glu Lys Xaa Glu Xaa Xaa  
 96 35 40 45  
 97 Xaa Leu Asn Xaa Arg Xaa Ala Asn Tyr Ile Xaa Lys  
 98 50 55 60

.00 <210> SEQ ID NO: 4  
 .01 <211> LENGTH: 60  
 .02 <212> TYPE: PRT  
 .03 <213> ORGANISM: Artificial Sequence  
 .05 <220> FEATURE:  
 .06 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
 .07 synthetic construct  
 .09 <400> SEQUENCE: 4

.10 Asn Gln Asn Ala Ser Ser Ile Arg Thr Ile Glu Met Lys Lys Ser Tyr  
 .11 1 5 10 15  
 .12 Gly Val Ser Ala Thr Pro Gly Ala Thr Ser Asn Ile Val His Ser Gly  
 .13 20 25 30  
 .14 Val Asn Asn Leu Met Asn Gly Arg Glu Lys Glu Lys Asn Glu Leu Gln  
 .15 35 40 45  
 .16 Glu Leu Asn Asp Arg Phe Ala Asn Tyr Ile Asp Lys  
 .17 50 55 60  
 .19 <210> SEQ ID NO: 5  
 .20 <211> LENGTH: 60

*what about Xaa's  
at locations*

*23-25, 27-29,  
32, 34-38, 42, 45,*

*47-49, 52, 54,  
59?*

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/532,198

DATE: 02/06/2006  
TIME: 14:26:39

Input Set : A:\ 211010049SEQLIST.TXT  
Output Set: N:\CRF4\02012006\J532198.raw

121 <212> TYPE: PRT  
122 <213> ORGANISM: Artificial Sequence  
124 <220> FEATURE:  
125 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
126 synthetic construct  
128 <220> FEATURE:  
129 <221> NAME/KEY: VARIANT  
130 <222> LOCATION: 7  
131 <223> OTHER INFORMATION: Xaa = any amino acid *what about Xaa at location*  
133 <400> SEQUENCE: 5 *24?*  
134 Val Arg Phe Leu Glu Ala Xaa Asn Lys Arg Leu Thr Asn Glu Leu Asn  
135 1 5 10 15  
136 Thr Leu Arg Glu Arg Trp Gly Xaa Glu Ala Glu Arg Ile Arg Ala Leu  
137 20 25 30  
138 Tyr Glu Ile Glu Met Asp Gln Leu Lys Lys Leu Leu Asp Glu Ala Phe  
139 35 40 45  
140 Ala Ala Arg Ser Glu Leu Leu Pro Lys Ile Asn Lys  
141 50 55 60  
143 <210> SEQ ID NO: 6  
144 <211> LENGTH: 60  
145 <212> TYPE: PRT  
146 <213> ORGANISM: Artificial Sequence  
148 <220> FEATURE:  
149 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
150 synthetic construct  
152 <220> FEATURE:  
153 <221> NAME/KEY: VARIANT  
154 <222> LOCATION: 8, 6-7, 13, 17, 19, 20-21, 24, 26-27, 30, 34-36, 38, 41-43,  
155 46, 50-53, 55-56, 60  
156 <223> OTHER INFORMATION: Xaa = any amino acid  
158 <400> SEQUENCE: 6  
159 Val Arg Xaa Leu Glu Xaa Xaa Asn Lys Arg Leu Thr Xaa Glu Leu Asn  
160 1 5 10 15  
161 Xaa Leu Xaa Xaa Xaa Trp Gly Xaa Glu Xaa Xaa Arg Ile Xaa Ala Leu  
162 20 25 30  
163 Tyr Xaa Xaa Xaa Met Xaa Gln Leu Xaa Xaa Xaa Leu Asp Xaa Ala Glu  
164 35 40 45  
165 Ala Xaa Xaa Xaa Xaa Leu Xaa Xaa Lys Ile Asn Xaa  
166 50 55 60  
168 <210> SEQ ID NO: 7  
169 <211> LENGTH: 60  
170 <212> TYPE: PRT  
171 <213> ORGANISM: Artificial Sequence  
173 <220> FEATURE:  
174 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
175 synthetic construct  
177 <400> SEQUENCE: 7  
178 Val Arg Ser Leu Glu Asp Glu Asn Lys Arg Leu Thr Asp Glu Leu Asn  
179 1 5 10 15

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/532,198

DATE: 02/06/2006

TIME: 14:26:39

Input Set : A:\ 211010049SEQLIST.TXT

Output Set: N:\CRF4\02012006\J532198.raw

180 Asp Leu Lys Asp Gln Trp Gly Asn Glu Thr Ala Arg Ile Lys Ala Leu  
181 20 25 30  
182 Tyr Asp Ser Asp Met Ser Gln Leu Arg Arg Ser Leu Asp Gln Ala Glu  
183 35 40 45  
184 Ala Ser Lys Ala Gln Leu Glu Met Lys Ile Asn Thr  
185 50 55 60  
187 <210> SEQ ID NO: 8  
188 <211> LENGTH: 60  
189 <212> TYPE: DNA  
190 <213> ORGANISM: Artificial Sequence  
192 <220> FEATURE:  
193 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
194 synthetic construct  
196 <400> SEQUENCE: 8  
197 ctcttgcaag gtccacagtt accattaaca aatcgagtcc tgcagtaaag gaatatgaaa 60  
199 <210> SEQ ID NO: 9  
200 <211> LENGTH: 60  
201 <212> TYPE: DNA  
202 <213> ORGANISM: Artificial Sequence  
204 <220> FEATURE:  
205 <223> OTHER INFORMATION: Description of Artificial Sequence:/ note =  
206 synthetic construct  
208 <400> SEQUENCE: 9  
209 tgagacaatc ctacaatttt tctggagcac ctatgggggg atcagttcaa attcatagca 60

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/532,198

DATE: 02/06/2006  
TIME: 14:26:40

Input Set : A:\ 211010049SEQLIST.TXT  
Output Set: N:\CRF4\02012006\J532198.raw

Note:  
If n and/or Xaa have been detected in the Sequence Listing. Please review the  
Sequence Listing to ensure that a corresponding explanation is presented in the <220>  
<23> fields of each sequence which presents at least one n or Xaa.

1; N Pos. 169, 226, 276  
2; Xaa Pos. 2, 48  
3; Xaa Pos. 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 17, 18, 20, 21, 23, 24, 25, 27, 28, 29, 32  
3; Xaa Pos. 34, 35, 36, 37, 38, 42, 45, 47, 48, 49, 52, 54, 59  
5; Xaa Pos. 1, 24  
6; Xaa Pos. 3, 6, 7, 13, 17, 19, 20, 21, 24, 26, 27, 30, 34, 35, 36, 38, 41, 42, 43, 46  
6; Xaa Pos. 50, 51, 52, 53, 55, 56, 60

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/532,198

DATE: 02/06/2006

TIME: 14:26:40

Input Set : A:\ 211010049SEQLIST.TXT

Output Set: N:\CRF4\02012006\J532198.raw

M:271 C: Current Filing Date differs, Replaced Current Filing Date

M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:120

Repeated in SeqNo=1

M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0

Repeated in SeqNo=2

M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0

Repeated in SeqNo=3

M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0

Repeated in SeqNo=5

M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0

Repeated in SeqNo=6